

## SPECIFICATION RT57-09-06-03

### 2,2 m<sup>3</sup> FRONT END LOADER (120kW)

#### SPECIFICATION

Comply / Not Comply

#### 1. CONDITIONS

In addition to the "General Specifications" and the conditions set out in the document "General Conditions of Contract ", the following special conditions shall apply:

TAKE NOTE

##### 1.1 GUARANTEE PERIOD

The machines and equipment shall be guaranteed for a period of not less than one (1) year.

#### 2. SERVICE

Supply and delivery of:

**2, 2 m<sup>3</sup> PNEUMATIC TYRED FRONT END LOADERS**

#### 3. OPERATING MASS

The operating mass of the complete machine equipped as specified but without ballast, shall not be less than 12,600kg.

Each machine shall have a non-corrosive labelling plate giving the tare mass of the complete machine.

The lettering on this plate shall be at least 20 mm in size.

#### 4. ENGINE

The net peak power output of the diesel engine shall not be less than 120kW.

The radiator fan shall be of the blower type.

#### 5. BUCKET AND RELEVANT DIMENSIONS

Buckets shall be of the heavy duty excavating type with replaceable cutting edges.

The buckets shall be fitted with spill guards or spill boards to prevent rocks from falling backwards onto the machines and operating mechanism.

The width of the bucket shall not less than the overall width of the machine.

The rated SAE heaped capacity shall not be less than 2, 2 m<sup>3</sup>.

The dumping clearance at maximum lift and 45° dumping angle shall not be less than 2,7 m.

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The reach from the front tyre at full lift at 45° shall not be less than 950 mm.

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Buckets shall be provided with **bolt-on** replaceable teeth.

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## 6. STABILITY

The loaders shall be capable of handling the bucket specified when loaded to its rated capacity according to SAE TR-151 with material weighing 2 000kg/m<sup>3</sup>.

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The machine offered shall be capable of tipping loads of not less than 9 300 kg at full turn.

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The machine shall be capable of tipping loads (straight) of not less than 10 600 kg.

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Preference may be given to machines which are fitted with counter weights over those machines which rely wholly or in part on tyre filling.

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## 7. PERFORMANCE

The maximum breakout force shall not be less than 100kN.

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## 8. TRANSMISSION

The transmission shall be of the full powershift type, with torque converter, having not less than four forward and four reverse gears.

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A forward/reverse soft shift shall be fitted. Limited-slip differential facility shall be fitted.

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Maximum travelling speed shall not be less than 35 km/h.

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The maximum speed in first gear forward and reverse gear shall not be less than 6 km/h.

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It must be possible to start the engine only in neutral gear.

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A hydrostatic drive may be offered instead of that described above.

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All wheels shall be driven.

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## 9. STEERING

Machines shall be of the articulated pivot steering type.

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The steering angle shall not be less than 40° to each side.

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Emergency steering/braking in the event of engine failure shall be provided.

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**10. TURNING RADIUS**

A turning radius outside tyres of not more than 6,0 m is required.

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**11. AXLES**

A rear axle oscillation of not less than 20° (total) is required.

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**12. TYRES**

The tyre size and ply rating shall conform to the TREDCO rating for 16 km/h for front end loaders.

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The tyre size shall not be less than 20,5 X 25 – L4.

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L3 tyres will not be accepted.

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**13. TYRE FILLING**

Bidders shall clearly state whether tyre filling is necessary for satisfactory operation.

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The cost of tyre filling, filling material and equipment shall be included in the bid price, if this is required to obtain the stability specified.

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**14. BRAKES**

Air and/or hydraulically powered disc brakes are required on all four wheels.

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The brakes shall either have independent circuits for front and rear axles or be of the fail safe type i.e. brakes are automatically applied if the pressure is lost and/or falls below a safe operating pressure.

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Fully enclosed braked combined with the hydrostatic drive system are also acceptable.

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**15. HYDRAULIC SYSTEM**

Hydraulic pumps for the steering and bucket hydraulic system shall be of the gear type.

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**16. FUEL SYSTEM**

The fuel tank shall have a capacity of not less than 240ℓ.

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The tank shall be fitted with lockable drain cocks.

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The tank filler cap shall be fitted with a lock.

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**17. GROUND CLEARANCE**

The machines offered shall have a ground clearance of not less than 400 mm.

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**18. CAB**

In addition to the requirements of paragraph 6 of “General Specifications”, the cabs shall be equipped with the following:

(a) Sound insulation

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(b) Vandalism Lock

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(c) A 1, 5 kg fire extinguisher of the BCF type or equivalent is required instead of a 9 kg extinguisher as specified.

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**19. INSTRUMENTS**

In addition to the requirements of paragraph 7 of “General Specifications”, the following instruments shall be provided on the instrument panel:

(a) Service indicator for air cleaner

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(b) Transmission oil pressure or temperature indicator

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**20. GENERAL SPECIFICATIONS**

Clause 7(f) shall be read:

“Fuel tank gauge or dipstick.....

\_\_\_\_\_

“Clause 8(b) shall not apply to this bid.

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Clause 12 shall be read:

“A rear tow hitch connected to the main chassis is required.”

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## TECHNICAL SCHEDULE

The Technical Schedule must be completed in full; failure to comply will invalidate your bid  
Clearly delete/cross-out whichever is not applicable at YES/NO questions

### 1. MAKE AND MODEL

Make and model \_\_\_\_\_

Manufacturer \_\_\_\_\_

Country of origin \_\_\_\_\_

### 2. ENGINE

Make and Model \_\_\_\_\_

Net power output as specified \_\_\_\_\_ kW

Maximum governed speed \_\_\_\_\_ rpm

Fuel consumption at full load \_\_\_\_\_ l/hr

### 3. TRANSMISSION

Make \_\_\_\_\_

Model \_\_\_\_\_

Is differential lock provided? YES / NO

Number of forward gears \_\_\_\_\_

Number of reverse gears \_\_\_\_\_

Maximum speed forward: 1<sup>st</sup> Gear \_\_\_\_\_ km/h

2<sup>nd</sup> Gear \_\_\_\_\_ km/h

3<sup>rd</sup> Gear \_\_\_\_\_ km/h

4<sup>th</sup> Gear \_\_\_\_\_ km/h

Maximum speed reverse: 1<sup>st</sup> Gear \_\_\_\_\_ km/h

2<sup>nd</sup> Gear \_\_\_\_\_ km/h

3<sup>rd</sup> Gear \_\_\_\_\_ km/h

### 4. TORQUE CONVERTER

Model \_\_\_\_\_

Ratio (stall) \_\_\_\_\_

### 5. TYPE OF HYDRAULIC PUMPS

5.1 Steering \_\_\_\_\_

	Bucket hydraulics	_____
	Make and model of hydraulic pump	_____
5.2	Output of hydraulic pumps and relief valve pressure	
	Steering	_____
	Bucket hydraulics	_____
<b>6.</b>	<b>OPERATING MASS</b>	
	Axle Loading (2 000 kg/m <sup>3</sup> )	
	Operating mass of complete machine equipped as specified	_____ kg
	Front axle (unloaded)	_____ kg
	Rear axle (unloaded)	_____ kg
	Front axle (loaded)	_____ kg
<b>7.</b>	<b>TYRES</b>	
	Size and Ply Rating	_____
	TREDCO Rating	_____
	Must tyres be filled for satisfactory operation?	YES / NO
	Type of material in tyres (if applicable)	_____
	Mass of material in tyres (if applicable)	_____
<b>8.</b>	<b>TIPPING LOAD</b>	
	Straight ahead	_____ kg
	Full turn	_____ kg
<b>9.</b>	<b>LIFTING CAPACITY</b>	
	Maximum lifting capacity	_____ kg
<b>10.</b>	<b>PERFORMANCE</b>	
	Maximum breakout force	_____ kN
<b>11.</b>	<b>STEERING</b>	
	Steering angle	_____ degrees
<b>12.</b>	<b>TURNING RADIUS</b>	
	Turning radius of outside tyres	_____ m

**13. AXLES**

Rear axle oscillation \_\_\_\_\_degrees

**14. BRAKES**

Type \_\_\_\_\_

Dual system YES / NO

Fail safe system? YES / NO

**15. BUCKET**

SAE struck capacity \_\_\_\_\_m<sup>3</sup>

SAE heaped capacity \_\_\_\_\_m<sup>3</sup>

Bucket handling capacity \_\_\_\_\_kg

Type of bucket fitted \_\_\_\_\_  
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Type of cutting edges \_\_\_\_\_

Type of teeth \_\_\_\_\_

Type of adaptors \_\_\_\_\_

Bucket width \_\_\_\_\_mm

Bucket tilt back at carry height \_\_\_\_\_degrees

**16. DIMENSIONS**

Maximum dump clearance at 45° \_\_\_\_\_m

Reach from machine at maximum dump height \_\_\_\_\_m

Ground clearance \_\_\_\_\_mm

Overall width of machine \_\_\_\_\_mm

**17. FUEL TANK / CAB / INSTRUMENTS / CONTROLS**

Type of cooling fan \_\_\_\_\_

Type of water separator fitted \_\_\_\_\_

Are the water separator and fuel filters fitted with replaceable elements? YES / NO

Type of alarm device for low oil pressure \_\_\_\_\_

Type of alarm device for high water temperature \_\_\_\_\_

Is automatic bucket kick out control fitted? YES / NO

Is automatic bucket level control fitted? YES / NO

Is 1, 5 kg fire extinguisher fitted?

YES / NO

**18. AIR CLEANER**

Make and model

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Is air cleaner provided with a safety element?

YES / NO

Are safety elements locally made?

YES / NO

**19. GENERAL SPECIFICATIONS**

Does the bid comply with the conditions contained in the "Gene Specifications"?

YES / NO

If not, please specify the deviations

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**20. GENERAL**

(a) Are all the required accessories fitted?

YES / NO

(b) Are all drawings, brochures, graphs and sheets submitted?

YES / NO

(c) Is the offer completely to specification?

YES / NO

(d) State all deviations from the specifications

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**Please note that failure to furnish all required technical specifications, brochures and information of products offered will invalidate the Bid.**